

EXHIBIT 2

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

WAYMO LLC,)
)
Plaintiff,)
)
vs.) Case No.
) 17-cv-00939-WHA
UBER TECHNOLOGIES, INC.;)
9 OTTOMOTTO, LLC; OTTO TRUCKING LLC,)
)
10 Defendants.)
11)

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VIDEOTAPED DEPOSITION OF
LAMBERTUS HESSELINK, Ph.D.
San Francisco, California
Tuesday, September 26, 2017
Volume I

Reported by:
MARY J. GOFF
CSR No. 13427
Job No. 2714543

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1 I said before, I teach courses in that field as 10:06:19
2 well. 10:06:22

3 Q To confirm, you have never worked on 10:06:22
4 self-driving cars, correct? 10:06:24

5 A Not specifically on self-driving cars, 10:06:27
6 correct. 10:06:29

7 Q And then again with the same up to page 17 10:06:30
8 "Scholarly Publications" barrier in mind, what 10:06:33
9 expertise would you point to on your CV that relates 10:06:39
10 to the design of an actual printed circuit board 10:06:41
11 with components and circuit layouts and the metal 10:06:47
12 layers, et cetera? 10:06:51

13 MR. NEUKOM: Objection to form. 10:06:54

14 A Where I personally have designed and laid 10:06:56
15 out a printed circuit board? 10:06:59

16 Q (BY MR. JACOBS) Correct. 10:07:01

17 A The only printed circuit board work that I 10:07:10
18 have done has been in relationship to classes that I 10:07:12
19 have taught. And during my Ph.D. work at Caltech, I 10:07:15
20 actually built my own electronic circuits. 10:07:18

21 But I'm certainly not an expert on printed 10:07:22
22 circuit board technology and the many different ways 10:07:27
23 in which that can be done. 10:07:29

24 But I have utilized it in a number of 10:07:32
25 applications, and I have been involved in companies 10:07:35

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1 autonomous vehicles. Is that what your question is? 02:53:33

2 Q All right. Now I see the confusion. 02:53:35

3 Is -- is the availability of a -- of LiDARs to 02:53:37

4 Waymo, a gating item today in Waymo's deployment 02:53:39

5 commercially of fully autonomous vehicles? 02:53:45

6 MR. NEUKOM: Objection to form. 02:53:50

7 A I -- I have no direct knowledge of what 02:53:53

8 the critical paths are in the development of that 02:53:55

9 product or service or technology. 02:54:00

10 Q (BY MR. JACOBS) And in the case of Uber, 02:54:01

11 is the availability of LiDARs to Uber, the reason 02:54:02

12 Uber has not deployed commercially fully autonomous 02:54:08

13 vehicles? 02:54:13

14 A I -- I have no insight. The only thing I 02:54:19

15 can say about it is that Uber started driving a lot 02:54:22

16 of miles after Levandowski went from Google to Uber, 02:54:28

17 and I would think that that is an absolute 02:54:32

18 prerequisite of making that system work. 02:54:35

19 But if the LiDAR is a limiting factor, I 02:54:38

20 would certainly not know. 02:54:42

21 Q Let me ask it conversely. If -- let's 02:54:43

22 assume the worst-case scenario from Waymo's 02:54:46

23 intellectual property standpoint, which is a 02:54:50

24 hypothetical in which Levandowski actually does take 02:54:52

25 the schematics for GBR3 and creates a clone of GBR3 02:54:56

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1 at Uber and then proliferates that kind of LiDAR 02:55:05
2 across a large population of cars. 02:55:12
3 Would Uber be able to deploy those cars 02:55:16
4 today under the -- under that factual scenario 02:55:20
5 commercially for fully autonomous driving? 02:55:23
6 A I would think that would be unlikely. But 02:55:28
7 I have no insight as to what other things that Uber 02:55:31
8 is working on, if they have a stellar software team, 02:55:35
9 if they have all the needed components to make a 02:55:39
10 self-driving car. 02:55:42
11 So far I don't think I have seen an 02:55:43
12 example that they can do that. But again, I have no 02:55:46
13 insight into the Uber development program, other 02:55:49
14 than what I have opined about. 02:55:53
15 Q What is an example in your work with 02:55:57
16 imaging? And you can correct the word, if you want. 02:56:01
17 I just use imaging to describe a lot of your 02:56:05
18 research work related -- that you were describing 02:56:07
19 before. 02:56:10
20 What is your work related to imaging in 02:56:11
21 which the software -- as you look back on it, the 02:56:12
22 software was the most significant challenge you 02:56:16
23 needed to overcome? 02:56:18
24 A Well, in the 1990s -- actually, going back 02:56:19
25 to the 1980s, fluid mechanics prior to that was 02:56:29

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1 [REDACTED] So based on all of that analysis that I 05:25:44
2 have, I believe that they are very similar. 05:25:48
3 Q And "they" being [REDACTED] in GBR3 05:25:50
4 in Fuji? 05:25:53
5 A Yeah, [REDACTED] [REDACTED]
6 [REDACTED] [REDACTED]
7 [REDACTED] [REDACTED]
8 [REDACTED] 05:26:05
9 A As far as I can tell from what I know, 05:26:12
10 yes. 05:26:15
11 Q Is it your understanding when you were 05:26:20
12 calculating the time periods that relate to the 05:26:22
13 value of each of the trade secrets in your report 05:26:27
14 that work on -- the work that was foregone by virtue 05:26:29
15 of, you say, acquisition of the trade secrets was 05:26:38
16 work that would have been done in -- sequentially as 05:26:42
17 to each trade secret or in parallel? 05:26:47
18 MR. NEUKOM: Objection to form. 05:26:52
19 A That's a complicated question I can't 05:26:53
20 really answer completely. So so my understanding is 05:26:56
21 that there was a limited number of engineers working 05:27:01
22 on different projects. And since you only have a 05:27:05
23 certain number of resources, you have to decide 05:27:11
24 where you spend those resources. 05:27:14
25 [REDACTED] 05:27:16

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1 [REDACTED] [REDACTED]
2 [REDACTED] [REDACTED]
3 [REDACTED] [REDACTED]
4 [REDACTED] [REDACTED]
5 [REDACTED] [REDACTED]
6 [REDACTED] 05:27:37
7 So in that sense, it may or may not have 05:27:38
8 been in parallel or in series. It depends on what 05:27:43
9 the particular trade secrets are. Some of them 05:27:47
10 might have been done in a series. Others probably 05:27:50
11 would have gone in parallel. 05:27:52
12 Q (BY MR. JACOBS) You haven't analyzed 05:27:52
13 which -- what the interrelationships are in that 05:27:54
14 connection? 05:27:57
15 MR. NEUKOM: Objection -- 05:28:00
16 A I was not -- 05:28:00
17 MR. NEUKOM: -- to form. 05:28:00
18 A -- I was not asked to kind of build a time 05:28:01
19 sequence and find out how these trade secrets were 05:28:05
20 misappropriated and what the relation was -- 05:28:09
21 relationship was between them. 05:28:11
22 Q (BY MR. JACOBS) And as between LiDAR 05:28:13
23 development -- 05:28:16
24 THE VIDEOGRAPHER: I can't hear you. 05:28:16
25 Q (BY MR. JACOBS) -- and other aspects -- as 05:28:18

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1 between LiDAR development and other aspects of 05:28:19
2 autonomous vehicle development, is it your 05:28:23
3 understanding that those other aspects could not 05:28:24
4 have been undertaken until the foregone time that we 05:28:29
5 were just referring to was expended or that all that 05:28:34
6 could have -- could under -- could be undertaken in 05:28:38
7 parallel? 05:28:40
8 MR. NEUKOM: Objection to form. 05:28:41
9 A It's a complicated question. So you said, 05:28:43
10 All the other aspects. 05:28:45
11 I'm not quite sure what you mean by that. 05:28:47
12 Q (BY MR. JACOBS) Well, let me back up. You 05:28:49
13 understand that Uber has been using Velodyne LiDARs 05:28:50
14 on its self-driving vehicles to develop its 05:28:53
15 self-driving capability to date, correct? 05:28:57
16 A That's part of -- 05:29:00
17 MR. NEUKOM: Objection to form. 05:29:01
18 A -- I believe that that's part of their 05:29:01
19 process, yes. 05:29:03
20 Q (BY MR. JACOBS) And that -- and do you 05:29:03
21 have any information that any other LiDAR has been 05:29:05
22 actually installed on an Uber self-driving vehicle 05:29:08
23 that's been deployed to the roadway? 05:29:11
24 A I don't have detailed knowledge about 05:29:15
25 everything that is on Uber's driving cars. 05:29:17

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1 Q That 12-month period would have ended last 05:35:33
2 month, correct, sir? 05:35:36
3 MR. NEUKOM: Objection to form. 05:35:40
4 A And if they started 13 months or 12 months 05:35:40
5 ago. 05:35:45
6 Q (BY MR. JACOBS) And August 12, 2016 was 05:35:45
7 when the acquisition closed? 05:35:47
8 A Yeah. Oh, I mean, if they started then 05:35:49
9 and if that was the 12-month period, that would be 05:35:52
10 the case, if you calculate it that way. 05:35:54
11 Q And meanwhile, Uber's use of Velodyne 05:35:56
12 LiDAR to develop other aspects of its self-driving 05:35:59
13 technology would be underway, correct, sir? 05:36:02
14 MR. NEUKOM: Objection to form. 05:36:04
15 A I believe that they are doing experiments 05:36:06
16 with the LiDAR from Velodyne. 05:36:10
17 Q (BY MR. JACOBS) So you're familiar with 05:36:13
18 the expression "the but-for world"? 05:36:14
19 A Which one? 05:36:16
20 Q The but-for-world? 05:36:16
21 A No. 05:36:16
22 Q And the but-for world is the hypothetical 05:36:16
23 world in which the misappropriation does not take 05:36:19
24 place. 05:36:22
25 A Okay. 05:36:23

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1 Q So in the hypothetical world from your 05:36:24
2 standpoint, the actual world from our standpoint, 05:36:26
3 the -- the hypothetical world from your standpoint, 05:36:28
4 the hypothetical but-for world, is it your 05:36:30
5 contention that the mis -- the alleged 05:36:40
6 misappropriation that has taken place had to have 05:36:48
7 been addressed by Uber's own development efforts 05:36:53
8 before any other autonomous vehicle development 05:36:56
9 efforts could be undertaken? 05:36:59

10 MR. NEUKOM: Objection to form. And I 05:37:01
11 will take a standing objection to any question that 05:37:07
12 relies on this hypothetical or but-for world. 05:37:10

13 And I think counsel and I have an 05:37:12
14 different understanding of that term, so -- but you 05:37:14
15 should still answer to the best of your ability. 05:37:21

16 A You're -- if I understand you correctly, 05:37:27
17 you're asking me in some hypothetical world whether 05:37:28
18 or not Uber would have to carry out all of these 05:37:32
19 trade secret efforts to design around it or develop 05:37:37
20 it on their own before they can do something else? 05:37:39

21 Q (BY MR. JACOBS) Yes. 05:37:43

22 A I would say the answer to that is no. 05:37:45
23 There are certain things that you could do without 05:37:50
24 first working out all of the trade secrets. 05:37:55

25 Q Is there any trade secret that is a 05:37:59

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1 I, MARY J. GOFF, CSR No. 13427, Certified
2 Shorthand Reporter of the State of California,
3 certify;

4 That the foregoing proceedings were taken
5 before me at the time and place herein set forth, at
6 which time the witness declared under penalty of
7 perjury; that the testimony of the witness and all
8 objections made at the time of the examination were
9 recorded stenographically by me and were thereafter
10 transcribed under my direction and supervision; that
11 the foregoing is a full, true, and correct
transcript of my shorthand notes so taken and of the
testimony so given;

12 That before completion of the deposition,
13 review of the transcript () was (XX) was not
14 requested: () that the witness has failed or
refused to approve the transcript.

15 I further certify that I am not financially
16 interested in the action, and I am not a relative or
17 employee of any attorney of the parties, nor of any
of the parties.

18 I declare under penalty of perjury under the
19 laws of California that the foregoing is true and
20 correct, dated this 27th day of September 2017.
21
22

23 
24

25 MARY J. GOFF, CSR No. 13427